

REMARKS

Favorable review is requested in view of the above amendments and following remarks. A new title has been submitted. No new matter has been added. Claims 12 - 15 are pending in the application.

Title

A new title was required. A new title has been added that is clearly indicative of the claimed subject matter.

Rejection under 35 U.S.C. § 102

Claims 12 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Oh (U.S. Patent No. 5,236,382). Applicant traverses this rejection, and respectfully requests reconsideration in view of the following comments.

Claim 12 requires that said electron emitting material contacts with an entire surface of said sintered body of porous metal when said electron emitting materials are melted. In contrast, Oh discloses a method for manufacturing an impregnated cathode structure that does not have the electron emitting material contacting the entire surface of the sintered body of porous metal. Instead, the metal powder is press molded into a cylindrical metal rod, which is fired and cut to obtain a porous pellet. See column 4, lines 26 - 31 of Oh. The porous pellet is then inserted into a cup-shaped reservoir, where the porous pellet and reservoir are welded together. See column 4, lines 32 - 34 of Oh and FIG. 1. Thus, the sides and bottom of the porous pellet, which are covered by the reservoir, cannot be in contact with the electron emitting materials. Therefore, Oh does not disclose or suggest that said electron emitting material contacts with an entire surface of said sintered body of porous metal when said electron emitting materials are melted. Withdrawal of the rejection is requested.

Claim 15 is patentable for at least the reasons stated above. In addition, claim 15 is even further removed because claim 15 requires that extra electron emitting materials are removed by shaking a container in which an impregnated cathode pellet and alumina balls are placed and washing by ultrasonic cleaning in water. Oh discloses removing impregnated residue by using

ultrasonic vibrations of cleaning water. See column 2, lines 21 - 27 of Oh. Furthermore, Oh discloses eliminating impregnated residue attached to the surface of the pellet by using water sprayed with high pressure. See column 4, lines 60 - 64 of Oh. However, Oh does not disclose or suggest removing extra electron emitting materials by shaking a container in which an impregnated cathode pellet and alumina balls are placed. Therefore, Oh does not disclose or suggest that extra electron emitting materials are removed by shaking a container in which an impregnated cathode pellet and alumina balls are placed and washing by ultrasonic cleaning in water. Withdrawal of the rejection is requested.

Allowable Subject Matter

Applicant gratefully acknowledges that claims 13 and 14 are allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

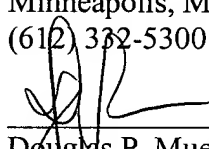
Conclusion

In view of the amendments and comments presented herein, favorable reconsideration in the form of a Notice of Allowance is respectfully requested. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Date: September 3, 2003



Douglas P. Mueller
Reg. No. 30,300
DPM:CAJ